

Cooperation in Polar Orbiting Environmental Satellites

Michael Mignogno - NOAA/NESDIS

Michel Langevin - EUMETSAT

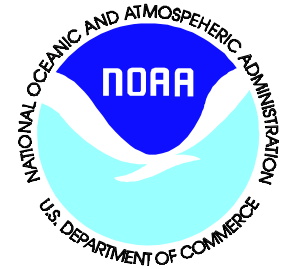
Polar Program Managers

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Information for Sustainability



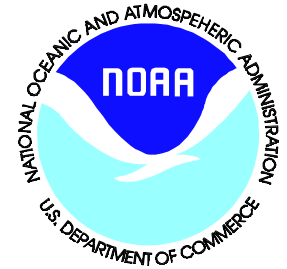
System Definition



- The Initial Joint Polar-Orbiting Operational Satellite (IJPS) System consists of two independent, but fully coordinated , polar satellite systems to provide for the continuous and timely collection and exchange of environmental data from space.
- Satellite systems are provided by:
 - NOAA - National Oceanic and Atmospheric Administration
 - EUMETSAT - European Organization for the Exploitation of Meteorological Satellites



Background



- IJPS provides an early step in transitioning to new national and international Polar satellite systems planned for the 2010 time period.
 - 1960 - 1997 Current U.S. Polar Satellites
 - POES - Polar-orbiting Operational Environmental Satellite
 - DMSP - Defense Meteorological Satellite Program
 - 1998 - 2003 Fifth Generation NOAA Satellites
 - NOAA-K, -L, -M continuous satellite operations for A.M. and P.M. orbits
 - Baseline capability for IJPS



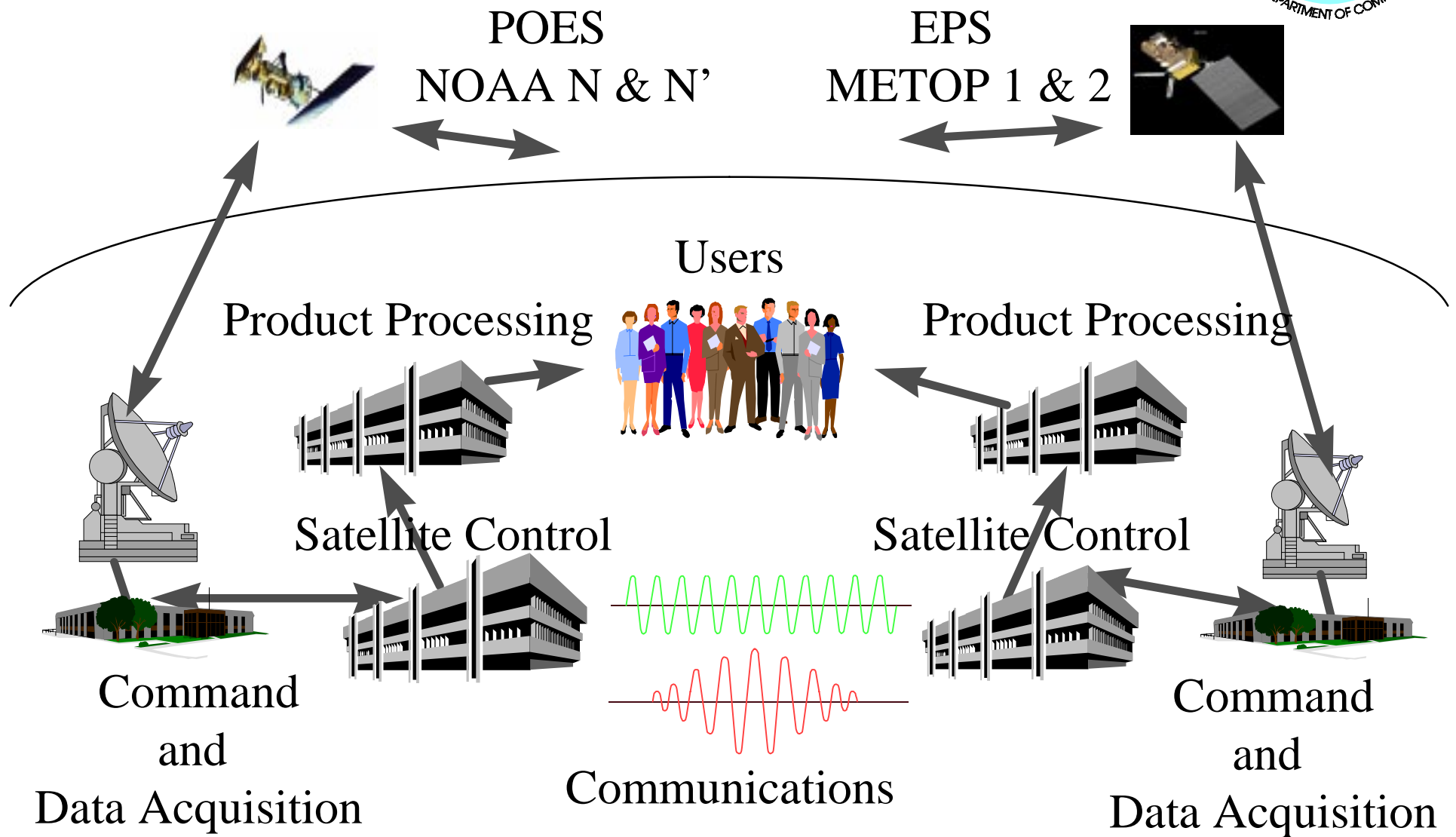
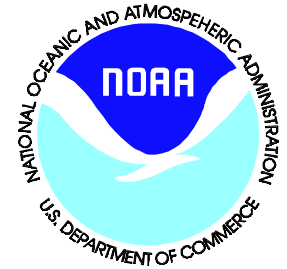
Background (Cont.)



- 2003 - 2010 IJPS Operations
 - METOP (Meteorological Operational) -1 & 2 satellites for mid-A.M. orbit
 - NOAA-N & N' satellites for P.M. orbit
 - Common suite of meteorological instruments
 - Ground system provided support for respective satellites
 - Cross-support provided for satellite blind orbits
 - Communications links for exchange of satellite data
- 2008 + JPS - Joint Polar System Operations
 - NPOESS - National Polar-orbiting Operational Environmental Satellite System for early A.M. and P.M. orbits
 - Metop 3 satellite for mid-A.M. orbit

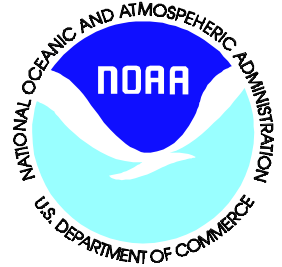


IJPS System



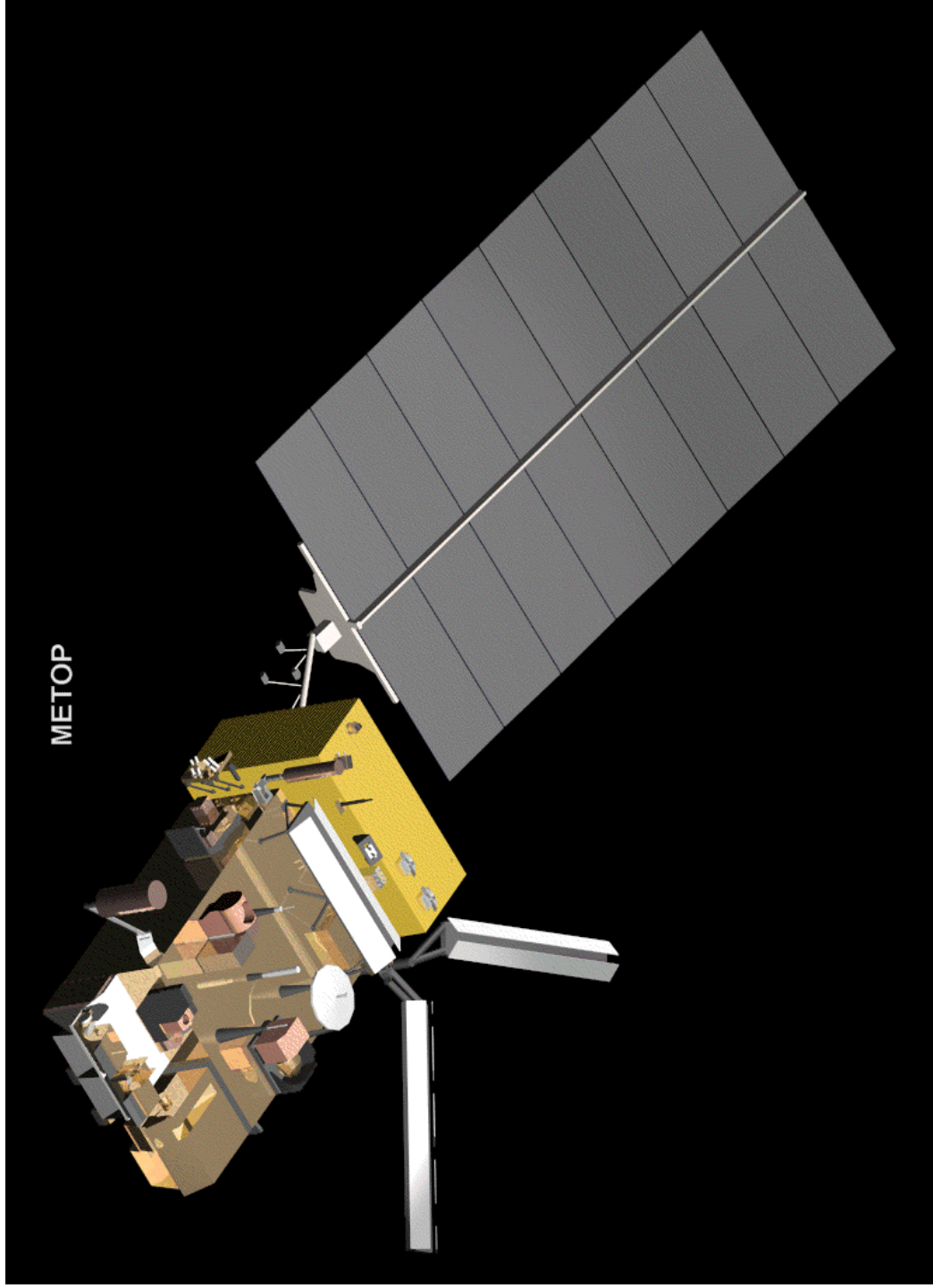


IJPS Satellites

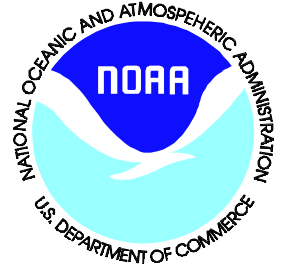


- NOAA-N & N'
 - 1400 MLST with Ascending Node
 - S-band Spacecraft Command and Control
 - Direct broadcast with existing HRPT and analog APT links
 - Common instrument suite plus additional instrument
- METOP-1 & 2
 - 0930 MLST with Descending Node
 - S-band Spacecraft Command and Control
 - Direct broadcast with HRPT and digital LRPT links
 - Common instrument suite plus additional instruments



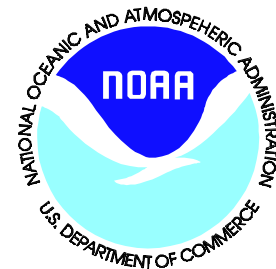


EUMETSAT IJPS Satellite (Cont.)



- Common Instruments
 - NOAA Provided
 - AVHRR/3
 - HIRS/4
 - AMSU-A1/A2
 - SEM
 - SARSAT
 - EUMETSAT Provided
 - MHS
 - NOAA & EUMETSAT
 - ARGOS (DCS)
- Additional Instruments
 - EUMETSAT Provided for Metop 1 and 2
 - IASI
 - ASCAT with ESA
 - GRAS with ESA
 - GOME with ESA
 - NOAA Provided for NOAA N and N'
 - SBUV

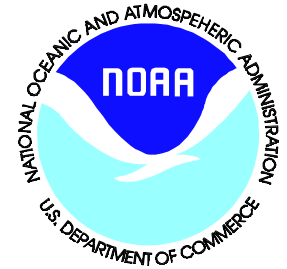
EUMETSAT IJPS Ground Systems



- NOAA and EUMETSAT will establish and maintain control of their satellite and ground system operations
 - Controlling all instruments on their satellite
 - Providing cross-support for satellite blind orbits
 - Processing and distributing global data and derived products
 - Archiving and making available satellite and global data received by ground system



IJPS Activities



- Early 1998 - Contract for METOP Phase C/D awarded
- 2002 - NOAA and EUMETSAT ground systems available to support satellite checkout and launch readiness activities
- mid-2003 - METOP-1 planned launch
- late 2003 - NOAA-N planned launch
- mid-2007 - NOAA-N' planned launch¹
- early 2008 - METOP-2 planned launch¹

¹Replacement satellites are launched based on operational need